F-3-1

JAXA DCS Processing System

- ADEOS-II Mission Operation Summary -

The 38th ARGOS Operation Committee
@ Monterey, CA USA
June 30 - July 2, 2004

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Earth Observation Center (EOC)

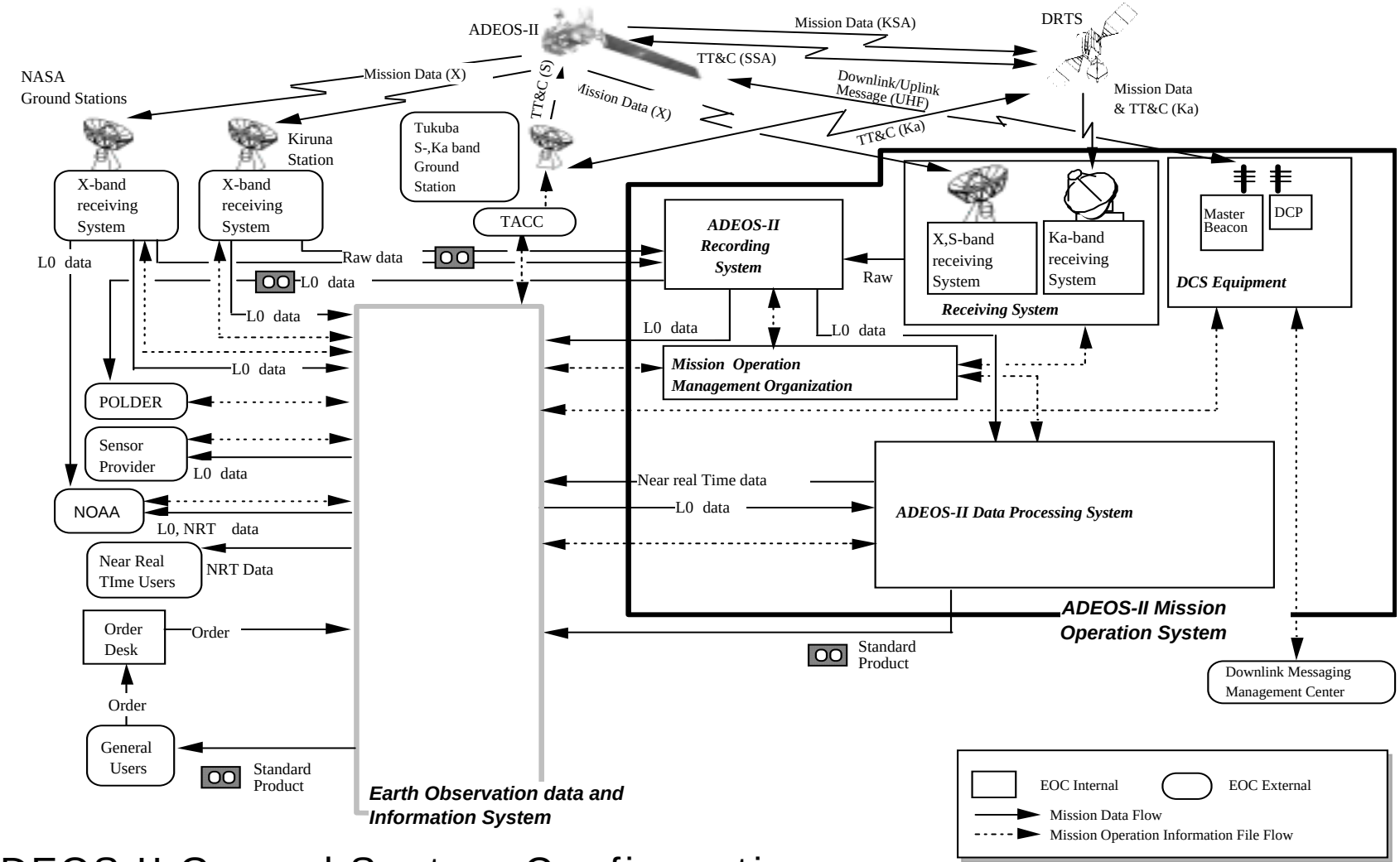
Japan Aerospace Exploration Agency (JAXA)

Overview

- **ADEOS-II was launched successfully on December 14, 2002 and shifted to routine operations in April 2003.**
- **Unfortunately ADEOS-II operation was terminated due to the malfunction of the solar power subsystem as of October 31, 2003.**
- **ADEOS-II had transferred 13TB of mission data during its in orbit operation.**
- **JAXA learned a lot of lessons in technical and scientific subjects through ADEOS-II system development and operation.**
- **ADEOS-II follow-on will be planned as soon as possible.**

ADEOS-II Operation History

Date	2002	2003												2004		
						May		Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar
Milestone	▲ADEOS-II Launch (Dec.14)					▲ADEOS-II Routine Operation	☆#37OPSCOM				▲ ADEOS-II Anomaly (Oct.25)			ADEOS-II Workshop▲		
	Checkout Phase ■Satellite/sensor initial checkout ■Ground system checkout					**Cal/Val Phase 1** ■Mission Management and Operations start ■GLI/AMSR Level-1 CAL/VAL					**Cal/Val Phase 2** ■GLI/AMSR Level-2 CAL/VAL		▲ **GLI/AMSR Data Release**			
													Archive Data Operation Phase			



ADEOS-II Ground System Configuration

Mission Management and Operations

The ADEOS-II mission management and operations was done successfully in corporation with internal and external parties.

- **Successful global data acquisition, processing and data distribution on the basis of near real time utilization**
- **Establishment of space based data relay technology between ADEOS-II and JAXA Data Relay Test Satellite (DRTS)**
- **Fruitful GLI and AMSR science products as a result of calibration and validation activity**
- **Constructive ARGOS/DCS project with the ARGOS-Next system between CNES and JAXA**

ADEOS-II Mission Data Archived

- **AMSR : 6,648 scenes**
- **(Scene size 1,600km(W)× 20,000km(L))**
- **GLI1km : 93,338 scenes**
- **(Scene size 1,600km(W)× 1,600km(L))**
- **GLI250m : 10,601 scenes**
- **(Scene size 1,600km(W)× 1,600km(L))**
- **ILAS-II : 3,450 downlink segments**
- **SeaWinds : 3,728 downlink segments**
- **POLDER : 3,287 downlink segments**
- **DCS : 3,728 downlink segments**
- ***Approximately 13TB***

ADEOS-II Scientific Activity

- **JAXA released AMSR and GLI science products to the public on December 24 , 2003 and continues to maintain these products with ADEOS-II science community.**
- **ADEOS-II Science Workshop was held from March 1st to 3 , 2004 in Tokyo.**

AMSR (Advanced Microwave Scanning Radiometer) product feature

✧ Quantitative soil moisture observation of wide land area

✧ All weather global observation of Sea Surface Temperature (SST)

✧ Sea Ice observation in Polar regions on a daily basis

✧ Timely observation of Tropical cyclones

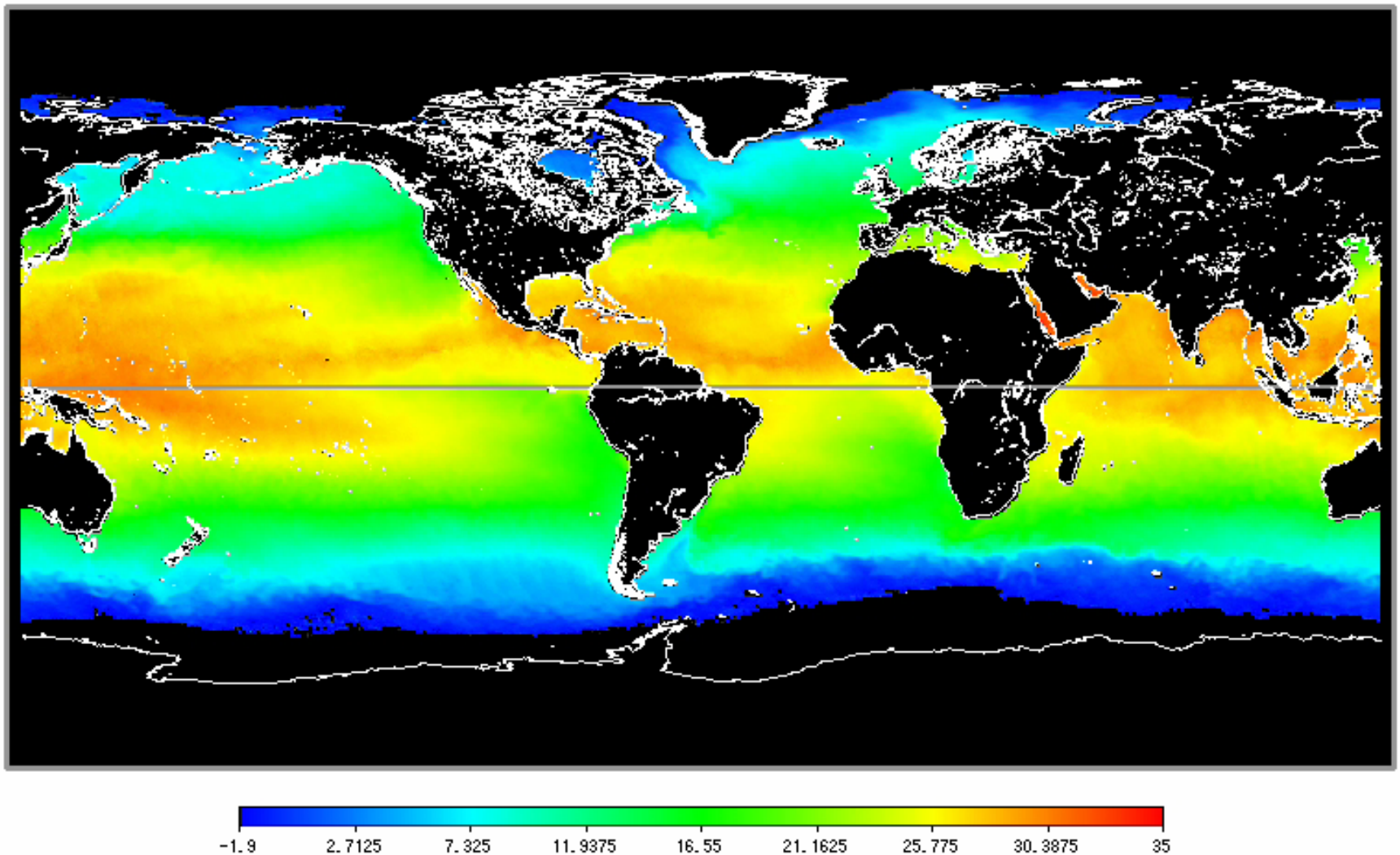
GLI (Global Imager) product feature

✧ Global aerosol distribution with a higher space resolution

✧ Global Snow and Ice observation, measures snow grain size and snow impurity

✧ Global land area observation with 250m resolution

✧ Primary Production of Ocean from SST, Chlorophyll-a concentration.

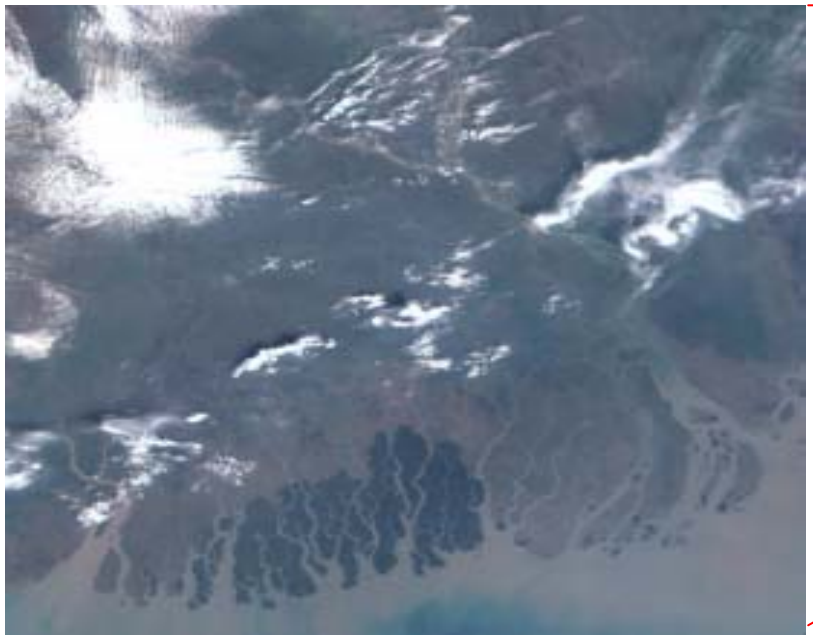


AMSR Sea Surface Temperature (2 Oct. 2003 – 24 Oct. 2003)

Sample of GLI Image

GLI First Image via DRTS

The first image obtained from "Midori-II"/ GLI via "Kodama", the data relay test satellite (DRTS)

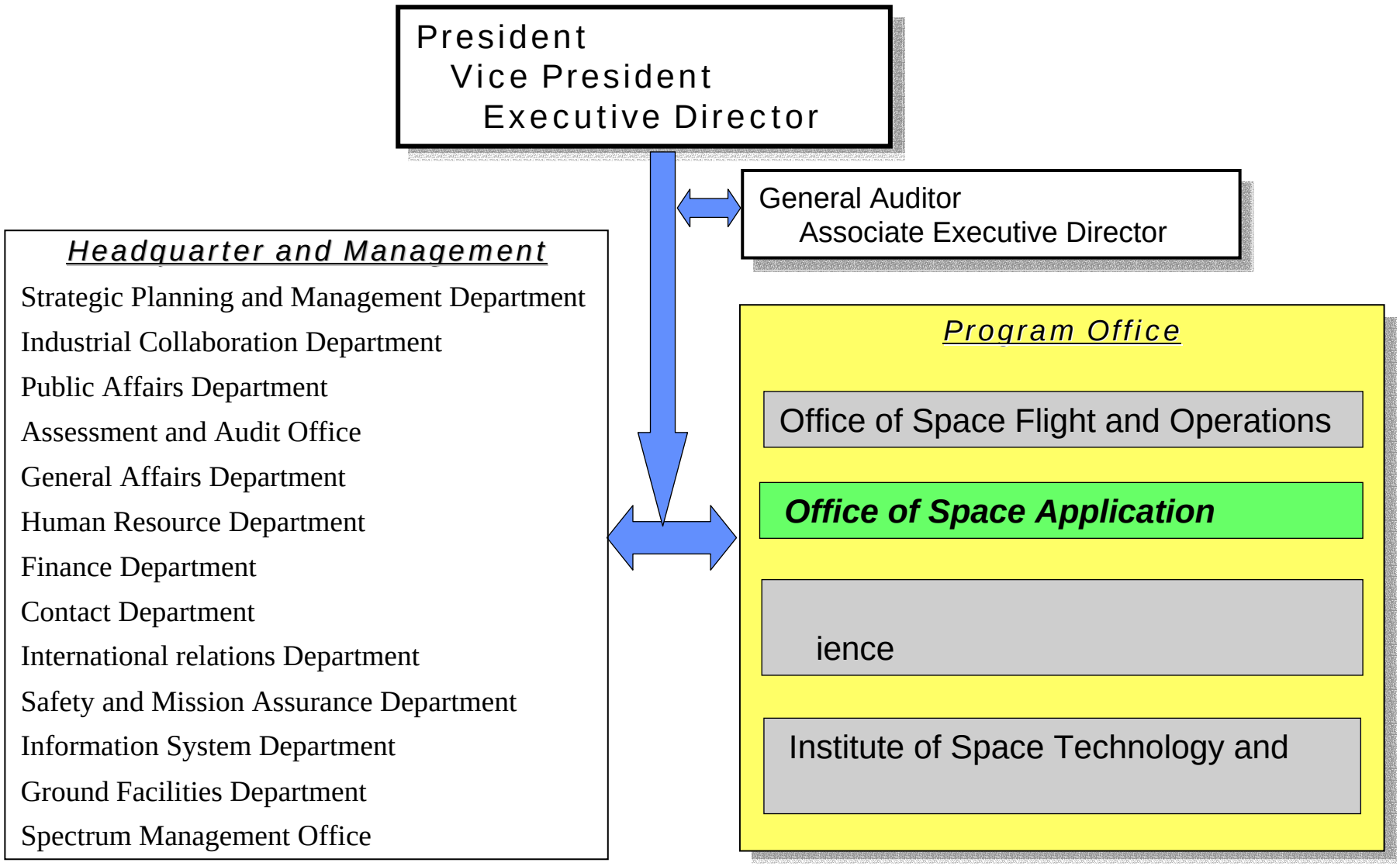


Mouth of the Ganges River

Feb. 20, 2003
GLI 250m

Tibet plateau～India～
Ceylon island

JAXA Organization as of October 1, 2003



Office of Space Application

- **Program Management and Integration Department**
- **Quality Assurance Office**
- **Satellite Operations systems Engineering Department**
- **Satellite Applications Center**
- Earth Observation Research and Applications Center (EORC)

Satellite Project Teams

- **OICESTS (Optical Inter-orbit Communications test Satellite)**
- **ETS-VIII (Engineering Test Satellite-VIII)**
- **WINDS (Wideband Internetworking Engineering Test and Demonstration Satellite)**
- **ADEOS-II (Advanced Earth Observing Satellite II)**
- **ALOS (Advanced Land Observing Satellite)**
- **GOSAT (Greenhouse Gases Observing Satellite)**
- **GPM/DPR (Global Precipitation Measurement/Dual-frequency Precipitation Radar)**

EORC Organization

(As of June 15, 2004)